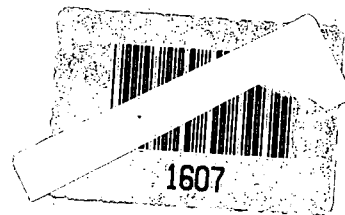




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466



OPA

Ref: 8HWM-ER

JAN 10 1995

MEMORANDUM

TO: John Giedt, Chairperson
Regional Response Team

FROM: H. Hays Griswold, OSC *H. Hays Griswold*
EPA Region VIII Emergency Response Branch

SUBJECT: Naples Truck Stop Removal: Recovered
Groundwater Bioremediation Treatment

Attached to this memorandum is a letter from Dean Richards of Richards Laboratories supplier of the biologic agent for Naples Truck Stop groundwater treatment system. The letter provides some additional information concerning the fate of the micro-organisms in the Publically Owned Treatment Works (POTW).

FILE PLAIN
99-05,05



Printed on Recycled Paper

**RICHARDS
LABORATORIES**

INC

RICHARDS INDUSTRIAL MICROBIOLOGY LABORATORY • 55 East Center • Pleasant Grove, Utah 84062 • (801) 785-2500 • Salt Lake: (801) 355-5579
• Water: (800) 453-1210 • Fax: (801) 785-2521

December 30, 1994

TO: Hayes Griswold

FROM: Dean Richards

RE: Fate of Bacteria in POTW

For the most part, any of the organisms found in the system to be used at the Vernal, Utah Bioremediation Site will be welcome at the POTW. All of the organisms used in Richards' system are derived from the same type of organisms found in the POTW.

Richards' organisms have been changed naturally by long and continuous exposure to petroleum hydrocarbons. These organisms have become highly efficient in the metabolism of BETX as well as other hydrocarbon compounds. All of these organisms require sources of carbon found in hydrocarbon; nitrogen from added nitrate and phosphorous from added phosphate.

When the hydrocarbon or carbon source is depleted, the organism can no longer live, likewise, when the supply of nutrient which we supply is shut off, the organisms become starved and die. There may be a few of the organisms that can make a living eating some of the hydrocarbon at the POTW. When this is the case, the plant is enhanced by their addition.

The BOD of water from most treatment sites rarely becomes higher than 3.0 mg/L. Nitrate and phosphate are monitored and added in such amounts as to be used up before the effluent is released.

Dean Richards